

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

2520 Venture Oaks Way, Suite 350
Sacramento, CA 95833
(916) 274-5721
FAX (916) 274-5743



**PROPOSED PETITION DECISION OF THE
OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD
(PETITION FILE NO. 502)**

INTRODUCTION

The Occupational Safety and Health Standards Board (Board) received a petition on March 20, 2008, from Dr. Chet Yokoyama and Dr. David Kennedy, both dentists, and from management consultant Jeff Green (Petitioners). The Petitioners request that the Board adopt a vertical standard regarding exposure to mercury in dental offices. This petition is considered by the Board pursuant to Labor Code Section 142.2, which permits interested persons to propose new or revised regulations concerning occupational safety and health, and requires the Board to consider such proposals and render a decision no later than six months following receipt.

SUMMARY

The petition discusses the hazards of using mercury in dentistry. Mercury is most notably present in the dental setting as the result of the use of mercury-based amalgams for fillings. The petition does not state the recommended provisions for the standard sought, but instead states that the Board should adopt “a vertical standard that both informs and establishes protective use guidelines” regarding the use of dental mercury amalgam.

EVALUATIONS AND RECOMMENDATIONS

The Division of Occupational Safety and Health (Division) and the Board staff both submitted written evaluations concerning this petition, together with a related petition (Board Petition File No. 501). The Petitioners in Board Petition File No. 501 recommended that the vertical dental amalgam standard contain the following provisions:

1. No mercury fillings may be implanted in dental patients in California.
2. No mercury fillings may be implanted in dental patients at dental schools.
3. When removing mercury fillings (or when placing such fillings, in the event that the bans referred to in Items 1 and 2 are not adopted), respirators or small particulate masks and full body protective clothing, including covering of the hair, shall be worn by all dental personnel exposed to mercury vapor or mercury particulate in the work place.
4. The first paragraph of the Proposition 65 warning shall be placed in every dental workplace.

Those evaluations considered the arguments made by the Petitioners in both No. 501 and No. 502, the studies referred to in the petitions, additional information submitted by the

Petitioners in both matters and other relevant information, such as existing safety orders that address hazards of concern to the Petitioners. In these evaluations, both the Division and Board staff recommended that the petition should be adopted in so far as it is referred to the Division for consideration by the Health Effects Advisory Committee (HEAC) as to whether the existing Permissible Exposure Limit (PEL) for mercury is sufficiently protective.

The Division said that this HEAC review should focus on neurologic and reproductive effects, and the Division suggested that the HEAC coordinate the evaluation with the planned Office of Environmental Health Hazard Assessment (OEHHA) review of reproductive toxicity. The Board staff said that the HEAC review should address reproductive, developmental and other health effects and that the Petitioners should be invited to participate in the advisory committee process.

THE BOARD'S DECISION

Based on the record regarding this matter, the Board believes that the Board staff's recommendation is the appropriate course of action. The HEAC is the appropriate body to consider revision of the mercury PEL, and the petition's proposed standards duplicate existing safety orders to a large extent. Among the facts and considerations that support this determination are the following:

- There is a PEL for mercury listed in Table AC-1 of California Code of Regulations, Title 8, Section 5155. This PEL is a general industry standard, as is appropriate, since the concern about mercury exposure is not limited to any single industry. If, indeed, that PEL should be changed, that change should be made in the general industry context, and as a result, the existing advisory committee that considers such revisions—the HEAC—is the appropriate venue for consideration of a mercury PEL revision.
- After reviewing relevant technical data, the Board staff evaluation notes that the current Section 5155, 8-hour time weighed average (TWA) mercury PEL “is consistent with the occupational exposure limits adopted by other organizations.” The Board staff further states that “studies indicate that exposures to dental workers, based on measurement of mercury in air, blood and urine, are typically below the TWA PEL.”
- Personal protective equipment requirements for employees exposed to saliva in dental procedures are set forth in California Code of Regulations, Title 8, Section 5193. Other personal protective equipment requirements are found at Section 3380-87. In addition, Sections 5141, 5144 and 5155 state requirements regarding steps to be taken to protect employees when airborne contaminants exceed allowable levels, and those sections, in effect, establish the criteria for determining when respirator use is necessary.
- Proposition 65 is administered by the California Environmental Protection Agency and the Attorney General. In addition, portions of California Code of Regulations, Title 8, Section 5194 regarding material safety data sheets and training already require that employees have available information about hazardous substances in the workplace.

- Dental amalgams are regulated as medical devices by the federal Food and Drug Administration (FDA). The FDA is expected to undertake rulemaking regarding these materials and has requested that public comments be submitted by July 28, 2008.
- Although stated in somewhat different terms, the Division and Board staff suggest basically the same focus for the HEAC's consideration of possible revision of the mercury PEL. As to the Division's suggestion that the HEAC coordinate its review with an OEHHA study, the HEAC should do so as it deems appropriate, but it should not be directed by the Board to do so in the event that the substance or the timing of the OEHHA study does not reasonably coincide with the HEAC's consideration of the mercury PEL.

ORDER

The Board hereby GRANTS this petition to the extent that the Division convene the HEAC to consider whether the PEL for mercury should be revised to address reproductive, developmental and other health effects; and, if appropriate, develop a revised PEL to be proposed to the Board for its consideration and adoption. In addition, the Petitioners shall be invited to participate in the advisory committee process.